

REPLY UNDER 37 CFR 1.116 –

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Serial No. 10/635,819

Attorney Docket No. 200206815-1

Title: METHODS AND APPARATUS UTILIZING EMBEDDED DATA LAYERS

**REMARKS**Amended ClaimsRECEIVED  
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Claims 1, 6, 12 and 17 are amended herein.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis et al. (U.S. Publication No. 2002/0001395) in view of LeMole et al. (U.S. Patent No. 6,009,410) and in further view of Huang et al. (U.S. Publication No. 2002/0054680). Applicant respectfully traverses these rejections and feels that claims 1-20 are allowable for the following reasons.

Applicant respectfully continues to maintain that Davis et al. discloses a “steganographic embedder” that “associates data with a media signal by encoding the data, a link to the data, or a combination of both into the media signal. The embedder may be located in an media signal capture device or an external process or device.” *See*, Davis et al., Abstract.

As such, Applicant contends that Davis et al. discloses apparatus and methods of associating digital metadata with images and media signals to be steganographically encoded in streaming image or media signal. In this, Applicant contends that Davis et al. only discloses steganographically encoding the metadata in a watermark having a single layer of an image stream and does not disclose or suggest steganographically encoding the metadata in a watermark having a two or more layers, as noted in the Final Office Action mailed on January 24, 2008 at Page 3. *See*, Davis et al., Abstract; Paragraphs [0024]-[0028], [0090]-[0096], [0100]-[0137], [0176]-[0185], [0206], [0002], [0003], [0015], and [0018].

Applicant has also carefully reviewed Davis et al. and respectfully maintains that Davis et al. also does not disclose or suggest encoding digital metadata into two or more data layers of a digital steganographic watermark of the image, wherein one or more selected data layers of the two or more data layers encodes the metadata associated with a selected image object of the two or more image objects or encoding a plurality of layers of data in a digital steganographic watermark of at least one sub-image of an image, as required by the Applicant's claimed invention.

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In addition, Applicant continues to respectfully maintain that LeMole et al. discloses a method for presenting customized advertising to a user on the world wide web that stored advertising images in a database and does not disclose or suggest associating multiple layers of metadata with an image and encoding each associated layer of metadata in a separate sub-watermark of an image watermark.

Applicant further respectfully maintains that Huang et al. discloses traditional print watermarks that are human perceivable using optical light filters and lenses and therefore does not teach or disclose steganographic digital watermarks that steganographically encode digital data that can be machine read. *See*, Huang et al., Figures 2-6; Abstract; Paragraphs [0011]-[0014] and [0024]-[0028].

In addition, Applicant respectfully submits that Huang et al. does not teach two or more data layers, but the overlaying of two or more traditional optical watermarks out of two or more print image layers. In support of this, Applicant notes paragraph [0013] of Huang et al. which states, "[0013] The combination of layers of various security levels provides solutions for various applications needs. For example, an optical watermark may appear as the logo of a company on a document issued by that company. There can be, for example, three watermark layers. The first layer may be a cancellation word, such as "COPY", and the verification device is the photocopier. The cancellation word "COPY" appears if the printed original document is photocopied. The latent image object in the second layer may be a logo of the company, and the verification device is a specially designed lens with gratings defined by periodical functions. The lens can be given to the related organizations to verify the originality of the document. The third layer may be embedded with a logo of a trusted third party. The verification device is also a lens, but the structure is random dot pattern, which is more secure than the other layers." *See*, Huang et al., Figures 1-6; and Paragraphs [0011]-[0014].

Applicant respectfully submits that a person of ordinary skill in the art would not consider traditional optical watermarks having multiple layers as being related to stenography or disclosing multiple layer digital watermarks that encode digital data steganographically.

Applicant disagrees with the Final Office Action's characterizations of Davis et al. and Huang et al., however, in the interest of furthering prosecution, Applicant has amended the claims to clarify that digital steganographic watermarks are being utilized to encode each layer of

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digital metadata in one or more digital or computer-readable data values in a steganographic sub-watermark of the steganographic watermark.

Applicant therefore respectfully submits that Huang et al. fails to teach or suggest a method that encodes digital metadata into two or more data layers of a digital steganographic watermark of the image, wherein one or more selected data layers of the two or more data layers encodes the metadata associated with a selected image object of the two or more image objects or encoding a plurality of layers of data in a digital steganographic watermark of at least one sub-image of an image and thus does not disclose or suggest all elements of the Applicant's claimed invention.

As Davis et al. discloses apparatus and methods of associating digital metadata with images and media signals to be steganographically encoded in streaming image or media signal, and since Huang et al. discloses multiple layer traditional non-steganographic non-computer-readable print watermarks that are human perceivable using optical light filters and lenses, and as LeMole et al. discloses a method for presenting customized advertising to a user on the world wide web that stored advertising images in a database, Applicant therefore contends that neither Davis et al., LeMole et al., or Huang et al., taken either alone or in combination, teaches or suggests digital/computer-readable metadata encoded in separate steganographic sub-watermarks of a steganographic image watermark of an image. As such, Applicant contends that neither Davis et al., LeMole et al., or Huang et al., taken either alone or in combination, teaches or suggests an advertising database that embeds selected or associated layers of computer-readable metadata in a separate steganographic sub-watermark of a steganographic image watermark of an advertising image upon selection and therefore does not teach or suggest all elements of the claimed invention.

Applicant respectfully contends that claims 1, 6, 12 and 17, as pending, have been shown to be patentably distinct from the cited references. As claims 2-5, 7-11, 13-16 and 19-20 depend from and further define claims 1, 6, 12 and 17, respectively, they are also considered to be in condition for allowance. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 1-20.

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CONCLUSION

In view of the above remarks, Applicant believes that all pending claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case. Please charge any further fees deemed necessary or credit any overpayment to Deposit Account No. 08-2025.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 312-2207.

Respectfully submitted,

Date: 3/24/08

Andrew C. Walseth  
Reg. No. 43,234

Attorneys for Applicant  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
3404 East Harmony Rd.  
Fort Collins, CO 80527-2400